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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,552	03/17/2006	Hye-Ryung Lee	3449-0600PUS1	5082
2292 7590 09/30/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER GOODLEY, JAMES E				
ART UNIT 2817		PAPER NUMBER		
NOTIFICATION DATE 09/30/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

# Office Action Summary

**Application No.**

10/572,552

**Applicant(s)**

LEE, HYE-RYUNG

**Examiner**

JAMES E. GOODLEY

**Art Unit**

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 3/17/2006 8/7/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claims 4 and 11** refer to, "wherein the trap filter eliminates a frequency signal of a channel bandwidth in each broadcasting system." It is unclear what each broadcasting system is.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-8, 10 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by **Harford et al. (US 5,337,091)**.

Regarding **claims 1, 5-8, 10 and 12-15**, Fig. 1 of Harford discloses a demodulating unit of a tuner, comprising:

An RF processing unit [RF downconverter 12];

a filter [SAW filters 15 and 16];

a sound signal processing line [output of IF amplifier 21] diverging from the filter to produce a sound signal [SOUND OUT] (the output of amplifier 21 is based on I Video output from block 18; the sound signal is also developed from the output of SAW filter 16, which diverges from the path of SAW filter 15);

a video signal processing line [output of PIX IF Amplifier 17] diverging from the filter to produce a baseband video signal [I and Q VIDEO OUTPUT]; and

a trap filter [4.5MHz trap 41] disposed at the video signal processing line to a beat component (see lines 19-24 of column 3).

The trap filter eliminates an FM radio signal of an upper adjacent channel (see line 50 of column 4 to line 39 of column 5 – an adjacent sound channel [47.25 MHz] to the video channel [45.75 MHz] of is eliminated, the sound channel having a 4.5MHz base bandwidth eliminated by the trap filter in the video path).

The video signal processing line includes a video detector [18, 19], a sound IF trap filter [41], a video equalizer [noise canceler 50 and SAW filter 15] and a video buffer amplifier [17, 47].

The sound signal processing line includes a sound detector [26] and a sound signal passing filter [24, 25].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 9, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Harford et al. (US 5,337,091)*.

Regarding **claims 2, 3, 9, 16 and 17**, Harford fails to specifically disclose, "wherein the trap filter eliminates a frequency signal of 4.85-5.25MHz"; "wherein the baseband signal is a baseband signal of US channel 6 in an NTSC broadcasting system"; or, "wherein the FM radio frequency is in a range of 88.1-88.5Mhz."

However, Harford does disclose the use of this tuner circuit in an NTSC broadcasting system (see column 1, lines 41-61). Harford also discloses that the sound is in an FM band of operation (FM detector 26 and lines 23-38 of column 5). One of ordinary skill in the art would appreciate that the tuner can be designed to accommodate different FM and NTSC broadcasting frequency ranges by appropriate design of the trap filter 41 and of the SAW filters 15 and 16.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to design the tuner to accommodate NTSC channel 6, the FM range of 88.1-88.5Mhz by appropriate design of the trap and SAW filters (with the trap eliminating a frequency signal of 4.85-5.25MHz), for the purpose of utilizing whichever NTSC and FM frequency range is desired.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. GOODLEY whose telephone number is (571)272-8598. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James E Goodley/

Examiner, Art Unit 2817

/Robert Pascal/

Supervisory Patent Examiner, Art Unit 2817